

REMARKS/ARGUMENTS

Entry of this response and reconsideration and allowance of the above-identified patent application are respectfully requested. Please note that a supplemental information disclosure statement (SIDS) has been filed concurrently with the present response. The Examiner is respectfully requested to consider and initial the cited references. Additionally, the SIDS filed January 31, 2005 has not been initialed. The Examiner is respectfully requested to consider and initial the cited references.

Upon entry of this amendment, claims 1-14 and 18 will be pending in the application. By this amendment, claims 1 and 9 are amended. Claim 18 has been added. No new matter is added. Applicant respectfully submits that, upon entry of the subject amendment, the application will be in condition for allowance. Applicant, thus, respectfully requests consideration of the above amendment and following remarks.

In the pending office action, claims 1-4 and 7-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,452,482 to Cern ("Cern"), in view of U.S. Patent No. 6,057,873 to Adams III ("Adams"). Claims 9-10 and 13-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cern and Adams, in view of U.S. Pat. No. 4,004,257 to Geissler ("Geissler"). Applicant wishes to thank the Examiner for the indication that claims 5-6 and 11-12 contain allowable subject matter if rewritten in independent form.

Claims 1 and 9 have been amended to clarify the claims. Claim 18 has been added.

Briefly, the present invention forms part of a power line communications system that may communicate data signals via medium voltage (MV) or other high voltage power lines. An implementation of an example embodiment of the invention employs a metal oxide varistor (MOV) as an element of a high pass filter to substantially attenuate the low frequency power line voltage and current waveforms, so as to isolate them from the communications device used to transmit and receive the higher frequency signals, thereby preventing damage to the communications device.

Independent claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Cern in view of Adams and independent claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Cern and Adams in view of Geissler. Generally, claims 1 and 9 require an interface circuit for interfacing radio frequency communication signals with a medium voltage power line. The interface circuit of claim 1 includes a medium voltage node, a reactive element, and a metal oxide varistor connected in series between the medium voltage node and the reactive element, where radio frequency communications signals are interfaced to the medium voltage node via the metal oxide varistor. The interface circuit of claim 9 includes a medium voltage node, a conductive line having a selected length, and a metal oxide varistor connected between the medium voltage node and the conductive line, where radio frequency communications signals are interfaced to the medium voltage node via the metal oxide varistor. Newly added claim 18 includes similar limitations.

In rejecting claims 1-4 and 7-8 under 35 U.S.C. § 103(a) as being unpatentable over Cern in view of Adams, the office action states that, "Adams discloses electrical isolation of CATV devices wherein a metal oxide varistor is connected between the medium voltage node (CATV coaxial cable) and the reactive element (transformer 520), wherein the radio frequency communication signals are interfaced to the medium voltage node via the metal oxide varistor (see col. 7, lines 5-24 and see Fig. 6)", and "At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Cern to include a surge protector coupled to the medium voltage line for the purpose of ensuring the coaxial cable is shorted out a predetermined shut threshold voltage for protection against electrical hazards (see Cern, col. 7, lines 5-11 and 25-29) (*Office Action dated July 21, 2005* at p. 3).

First, applicant asserts that there is no reason, suggestion or motivation, either explicitly or implicitly, to combine Cern and Adams. The references are in two different fields of art as Cern relates to power line communications and Adams relates to consumer electronic product safety. Further, Cern discloses an apparatus for enabling communication of a data signal via a power transmission cable, while Adams discloses a method for isolating a consumer appliance coupled to receive

radio frequency signals from an electrical hazard. Clearly, Adams is not applicable art as it has nothing to do with power line communications and enabling communication of a data signal via a power transmission cable, and therefore it would be inappropriate to combine Cern and Adams.

Second, Adams discloses a shunt device which acts as a surge protector for consumer appliances. "When the potential voltage across the shunt device 660 reaches the shunt threshold voltage, the shunt device will conduct and thus short the center conductor connector 612 to the shield connector 611." Adams at col. 7, lines 8-11. This method of isolating an appliance from an electrical hazard (e.g., lightning strike) prevents high voltages over a shunt threshold voltage from reaching the appliance but does not substantially attenuate low frequency voltages from passing therethrough. In contrast to Adams, the MOV of the invention substantially attenuates low frequency power line voltages from reaching the communication device while permitting the passage of data signals. Therefore, Adams teaches away from the invention.

Third, in Adams, the shunt device 660 shown in Fig. 6 is connected in parallel to the center conductor connector 612 and the isolation transformer 620 (Adams, col. 7, lines 6-17 and Fig. 6). This is different from amended claims 1 and 9 and independent claim 18, which require "a metal oxide varistor connected **in series** ... " Consequently, Applicant submits that claim 1, 9, and 18 are allowable over Cern in view of Adams. In addition, because a claim that is dependent from a patentably distinct claim is also patentably distinct, Applicant respectfully requests allowance of claims 2-8, which depend from claim 1.

Additionally, Geissler does not disclose a MOV in series as required independent claims 1, 9, and 18. Consequently, Applicant submits that independent claims 1, 9 and 18 are in condition for allowance. In addition, because a claim that is dependent from a patentably distinct claim is also patentably distinct, Applicant respectfully requests allowance of claims 2-8, which depend from claim 1, and claims 10-14, which depend from claim 9 are in condition for allowance..

In view of the foregoing, it is respectfully submitted that the claimed invention is patentably distinguished over the asserted prior art references and that the

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application stands in condition for allowance. It is respectfully requested that the application be reconsidered, that all pending claims be allowed, and that the application be passed to issue.

CONCLUSION

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact Mel Barnes at (301) 581-0081, to discuss any other changes deemed necessary in a telephonic interview.

If an additional extension is necessary for this amendment to be considered timely filed, a written conditional petition therefore is hereby made. Authorization is hereby granted to charge any deficiencies in fees, including any fees for extension of time under 37 C.F.R. §1.136(a), to Deposit Account 50-0687. Please credit any overpayment in fees to the same deposit account.

Date: September 23, 2005



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